

REPORT DOCUMENT

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13. ABSTRACT (Maximum 200 words) The Conference was well-attended with 108 participants (attendees list attached). The attendees represented the spectrum of endeavor in this field coming from academia, industry, and government laboratories, both U.S. and foreign scientists, senior researchers, young investigators, and students.					
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**1998 GORDON RESEARCH CONFERENCE
on ELECTRODEPOSITION
FINAL PROGRESS REPORT**

**AIR FORCE OFFICE OF SCIENTIFIC RESEARCH
GRANT NO. F49620-98-1-0153**

The Gordon Research Conference (GRC) on ELECTRODEPOSITION was held at COLBY SAYWER 2 from 8/9/98 thru 8/14/98. The Conference was well-attended with 108 participants (attendees list attached). The attendees represented the spectrum of endeavor in this field coming from academia, industry, and government laboratories, both U.S. and foreign scientists, senior researchers, young investigators, and students.

In designing the formal speakers program, emphasis was placed on current unpublished research and discussion of the future target areas in this field. There was a conscious effort to stimulate lively discussion about the key issues in the field today. Time for formal presentations was limited in the interest of group discussions. In order that more scientists could communicate their most recent results, poster presentation time was scheduled. Attached is a copy of the formal schedule and speaker program and the poster program. In addition to these formal interactions, "free time" was scheduled to allow informal discussions. Such discussions are fostering new collaborations and joint efforts in the field.

I want to personally thank you for your support of this Conference. As you know, in the interest of promoting the presentation of unpublished and frontier-breaking research, Gordon Research Conferences does not permit publication of meeting proceedings. If you wish any further details, please feel free to contact me. Thank you.

Sincerely,



GERY R STAFFORD

NIST

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FEB 09 1999

Electrodeposition Gordon Conference
Colby-Sawyer College
New London, New Hampshire USA
August 9-14, 1998

Program

Session 1. (Sunday evening, 7:30 - 9:30 pm)

Topic: Deposition Involving Semiconductors

Discussion Leader - **Walther Schwarzacher** - University of Bristol

Peter Searson - The Johns Hopkins University

- *Electrochemical deposition of metals on silicon*

Daniel Lincot - CNRS-ENSCP, Paris

- *Cathodic electrodeposition of semiconducting oxides with ZnO as a reference example*

9:30 pm Social Mixer

Session 2. (Monday morning, 9:00 am - 12:30 pm)

Topic: UPD/Electrocrystallization

Discussion Leader - **Radoslav Adzic** - Brookhaven National Laboratory

Gregory Jerkiewicz - Universite de Sherbrooke

- *Energetics of UPD Layers*

Olaf Magnussen - University of Ulm

- *Nucleation and growth of ultrathin nickel films*

Philippe Allongue - CNRS, Paris

- *Growth and properties of ultrathin magnetic films*

Session 3. (Monday evening, 7:30 - 9:30 pm)

Topic: UPD/Electrocrystallization

Discussion Leader - **Radoslav Adzic** - Brookhaven National Laboratory

Richard Nichols - University of Liverpool

- *In-situ scanning probe microscopy (SPM) and stress investigations of metal electrodeposition processes*

Benjamin Scharifker - Universidad Simon Bolivar

- *Current theoretical and experimental approaches to the study of electrochemical nucleation with diffusion-controlled growth*

9:30 pm Poster Session 1

Session 4. (Tuesday morning, 9:00 am - 12:30 pm)

Topic: Morphology

Discussion Leader - **Jacob Jorne** - University of Rochester

Fereydoon Family - Emory University

- *Dynamics of surface fluctuations in electrodeposition: theory, simulations and experiments*

Francoise Argoul - Centre de Recherche Paul Pascal

- *In-situ optical techniques for probing an electrodeposition experiment in thin gap geometry*

Dale Barkey - University of New Hampshire

- *Thermodynamics and the growth form of single crystals*

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Session 5. (Tuesday evening, 7:30 - 10:30 pm)

Topic: Novel Materials/Technology

Discussion Leader - **Jan Talbot** - University of California, San Diego

Daniel Schwartz - University of Washington

- *Electrodeposited metal cyanide and thiocyanate compounds for new environmentally benign technologies*

Short Talks

Session 6. (Wednesday morning, 9:00 am - 12:30 pm)

Topic: Additives

Discussion Leader - **James Martin** - LeaRon Inc.

Jacek Lipkowski - University of Guelph

- *Adsorption of organic additives at metal surfaces and their influence on electrodeposition phenomena*

Alan West - Columbia University

- *Theoretical and experimental studies of additives in copper electrodeposition*

Andrew Gewirth - University of Illinois at Urbana-Champaign

- *Influence of organic and inorganic additives on the growth and scaling of Cu electrodeposits*

Session 7. (Wednesday evening, 7:30 - 9:30 pm)

Topic: Nanostructures

Discussion Leader - **Jay Switzer** - University of Missouri, Rolla

Reginald Penner - University of California, Irvine

- *A hybrid electrochemical/chemical route to luminescent quantum dots on electrode surfaces*

Joerg Ziegler - University of Ulm

- *Electrochemical nanostructuring with an STM*

9:30 pm Poster Session 2

Session 8. (Thursday morning, 9:00 am - 12:30 pm)

Topic: Alloy Deposition

Discussion Leader - **Gina Whitney** - IBM

Michael Matlosz - ENSIC, Nancy

- *Mechanism of copper-nickel alloy deposition from citrate baths*

Vladimir Jovic - University of Belgrade

- *Characterization of electrodeposited alloys by electrochemical techniques*

Charles Hussey - University of Mississippi

- *The electrodeposition of transition metal-aluminum alloys from chloroaluminate molten salts*

Session 9. (Thursday evening, 7:30 - 9:30 pm)

Topic: Electroless Deposition

Discussion Leader - **Tetsuya Osaka** - Waseda University

Konrad Weil - Penn State University

- *In-situ STM studies of the mechanism of electroless copper deposition*

Hideo Honma - Kanto Gakuin University

- *Electroless nickel deposition on the nano-size protruded optical fiber*

Conference Registration List

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Check for recent publications on co-depositing metal (I) with liquid crystal - small channels grow th.

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